ABSTRACT

A friction transmission unit for transmitting power between input and output members by means of friction and capable of loss reduction and large torque transmission. Power is transmitted between a planar disk (16) and a roller (10), which contacts the upper surface of the planar disk (16). The profile of the peripheral surface (14) of the roller (10) which actually contacts the upper surface (20) of the disk (16) is expressed as $z=a\cdot\sinh(bx^2)$. This profile realizes a contact stress distribution which is constant over an area corresponding to approximately 80% in the width direction of the entire contact region. This profile also prevents formation of peak stresses near and at the edges of the contact region and, instead, enables formation of monotonic decrease of stress in areas near the edges.